# MONTHLY WEATHER REVIEW.

Editor: Prof. Cleveland Abbe. Assistant Editor: Frank Owen Stetson.

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## ANNUAL SUMMARY, 1905.

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## INTRODUCTION.

The present summary for 1905 is based essentially upon data received from about 166 regular Weather Bureau stations, 33 regular Canadian stations, and from such climate and crop sections as have forwarded their annual summaries in time.

The statistical tables and charts have been prepared under the supervision of Mr. W. B. Stockman, Chief, Division of Meteorological Records, and the summary of flood movements by Dr. H. C. Frankenfield, Professor of Meteorology.

## FORECAST DIVISION.

Prof. E. B. GARRIOTT, in charge.

#### RIVER AND FLOOD SERVICE.

With but few exceptions the floods of the year were of moderate character and were not attended by any considerable loss or damage. A few were quite serious, especially in the Grand River Valley of Michigan, and in New Mexico and Arizona. Detailed accounts of the various floods will be found in the Weather Reviews for the appropriate months. The principal ones were as follows: That of the Sacramento River in January; the southeastern rivers in February; the upper Ohio River in March; the lower Ohio and lower Mississippi rivers and their tributaries, the Red, the rivers of Texas and the upper Rio Grande in May; the upper Mississippi, the Grand River of Michigan, the Red, and the rivers of New Mexico and eastern Colorado in June; the Missouri and upper Mississippi rivers and their tributaries, the Pecos, Red, White, and Black rivers of the southwest, the James River of Virginia and the rivers of the Carolinas in July; the local floods in southeastern Pennsylvania in August; the lower Missouri and middle Mississippi rivers in September, a very unusual occurrence; and the rivers of Arizona in November. While none of these floods were attended by loss of life or great loss of property, yet the aggregate losses amounted to several millions of dollars.

With but one or two comparatively unimportant exceptions the floods were forecast at the proper times and with the usual accuracy.

The following changes were made in the river and flood districts:

## NEW DISTRICTS ESTABLISHED.

Concord, N. H., for the Merrimac River.

Denver, Colo., for the rivers of Colorado, Wyoming, Utah, Arizona, and New Mexico.

Hartford, Conn., for the Connecticut and Housatonic rivers. Moorhead, Minn., for the Red River of the North. Portland, Me., for the rivers of Maine.

#### DISTRICT ABOLISHED.

This territory was divided between the stations at Portland, Me., Concord, N. H., and Hartford, Conn., as stated above.

There is now a regular Weather Bureau station at Peoria, Ill., instead of a special river station, and daily river observations were also begun at the regular stations at El Paso, Tex., La Salle, Ill., Pueblo, Colo., and Roswell, N. Mex. (Hondo River). The name of the special river station at Montague, Me., was changed to West Enfield, and that of the special rainfall station at Rocky Mount, N. C., to Battleboro.

Special river and rainfall stations were established and discontinued during the year as shown in the subjoined statement:

#### RIVER STATIONS ESTABLISHED.

District.

Station. Denver, Colo. Portland, Oreg. Albuquerque, N. Mex. Barton, Oreg. Beatrice, Nebr.
Beverly, Ohio.
Billings, Mont.
Blair, S. C.
Carlsbad, N. Mex. Kansas City, Mo. Columbus, Ohio. Sioux City, Iowa. Charleston, S. C. Denver, Colo. Chappel, S. C. Espanola, N. Mex. Florence, Colo. Charleston, S. C. Denver, Colo. Denver, Colo. Fountain, Colo. Denver, Colo. Franklin, Pa. Pittsburg, Pa. Greenville, N. C. Raleigh, N. C. Denver, Colo. Higbee, Colo. San Francisco, Cal. Kennett, Cal. Las Animas, Colo. Denver, Colo. Logan, N. Mex. Denver, Colo. Lowell, Mich. Grand Rapids, Mich. Moncure, N. C Raleigh, N. C. Sioux City, Iowa. Denver, Colo. Musselshell, Mont. Nepesta, Colo. Oakdale, Ga. Atlanta, Ga. Pecos, Tex. Denver, Colo. Little Rock, Ark. Harrisburg, Pa. Pine Bluff, Ark. Renovo, Pa. Rincon, N. Mex. Roswell, N. Mex. (Hondo River). Denver, Colo. Denver, Colo. Sioux City, Iowa. Denver, Colo. Rousseau, S. Dak. Salida, Colo. Denver, Colo. Cairo, Ill. San Marcial, N. Mex. Savannah, Tenn. Tarboro, N. C. Trinidad, Colo. Raleigh, N. C. Denver, Colo. Denver, Colo. Waldo, N. Mex. Wolf Point, Mont. Sioux City, Iowa.

#### RIVER STATIONS DISCONTINUED.

Station. District.Lockhaven, Pa. Harrisburg, Pa. Pittsburg, Pa. Knoxville, Tenn. Oil City, Pa. Rotherwood, Tenn. St. Cloud, Minn. Minneapolis, Minn.

#### RAINFALL STATIONS ESTABLISHED.

Station. Abererombie, N. Dak. Caledonia, N. Dak. Colorado Springs, Colo. Crookston, Minn. Drayton, N. Dak. Eureka Springs, Ark. Fergus Falls, Minn. Fort Stanton, N. Mex. Grand Forks, N. Dak. Las Vegas, N. Mex. Maxwell City, N. Mex. Olden, Mo. Oregon, Ark. Pembina, N. Dak. Raton, N. Mex. Santa Rosa, N. Mex.

Moorhead, Minn. Moorhead, Minn. Denver, Colo. Moorhead, Minn. Moorhead, Minn. Little Rock, Ark. Moorhead, Minn. Denver, Colo. Moorhead, Minn. Denver, Colo. Denver, Colo. Little Rock, Ark. Little Rock, Ark. Moorhead, Minn. Denver, Colo. Denver, Colo.